

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

PUBLICATION NUMBER : 57193007  
PUBLICATION DATE : 27-11-82

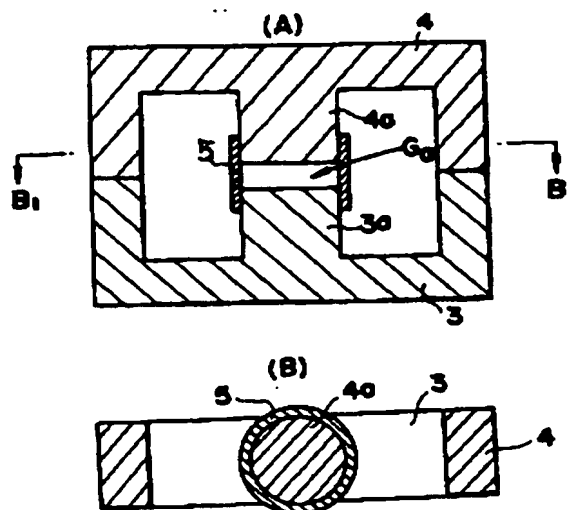
APPLICATION DATE : 23-10-81  
APPLICATION NUMBER : 56170301

APPLICANT : TDK CORP;

INVENTOR : AKACHI YOSHIKI;

INT.CL. : H01F 3/14 H01F 15/00 H01F 17/06  
H01F 27/24

TITLE : MAGNETIC CORE



**ABSTRACT :** PURPOSE: To control an unusual increase in output voltage or frequency at the time of light load when a magnetic core is used as the magnetic core for coil superimposing direct current by arranging a magnetic substance around the gap in the magnetic core having the gap at a part of the magnetic core.

**CONSTITUTION:** Two E shaped cores 3, 4 are combined and air gap Ga is formed between both the cores 3a-4a and a magnetic substance 5 is arranged around the air gap Ga. In this composition, when a choke coil or the like is composed by using the magnetic core, resultant magnetic permeability at the coupling part of the gap Ga and a magnetic substance 5 is decided by depending on the permeability of the magnetic substance 5 at a low current region where the magnetic substance 5 does not magnetically saturate and the value becomes extremely high. Therefore, inductance at a low current region of discontinuous choke current becomes extremely high and an increase in output voltage and frequency is controlled. Meanwhile, when a choke current reaches a fixed value or over, the magnetic substance 5 magnetically saturates. Therefore, flat current-inductance characteristics similar to the case of gap Ga only is obtained.

COPYRIGHT: (C)1982,JPO&Japio

**BEST AVAILABLE COPY**